


Square Foot Gardening

Author Mel Bartholomew

Is a retired civil engineer who decided to become a gardener. Dissatisfied with the growing methods recommended to him, he researched the best methods and developed his own with the goals of least manual labor, conservation of resources and greatest yield.

He published his original book in 1981 & an updated version in 2006. Mel also hosted a series on PBS, Discovery & The Learning Channel. He now oversees the SFG foundation and websites.



Although not called by the same term, French intensive gardening, a similar method, was developed in 1890. The method was soon used in English gardens as well, and finally introduced to the United States by Alan Chadwick in California in the late 1960's.

Tenets of Square Foot Gardening

- Raised beds, 4' x 4' or 3' x 3, using a specific planting medium
 - 1/3 coarse grade Vermiculite (a silicate mineral to loosen soil and retain moisture)
 - 1/3 sphagnum peat moss (lightweight water retention medium)
 - 1/3 blended compost (nutrient supply - various types, animal and plant)

This medium must be refreshed each year.

- Grids of 1' x 1' across entire bed.
- Planting one type of plant in each grid, the number of plants dependent on the type and full growth size.
 - Small - 16 per square foot (3" x 3" per plant)
 - Medium - 9 per square foot (4" x 4" per plant)
 - Large - 4 per square foot (6" x 6" per plant)
 - Extra large - 1 per square foot
 - Plant height should be considered in order to avoid blocking sun from other crops.
 - Plants that require more space should be planted in complimentary spaces around the square foot beds. These include fruit trees and fruiting vines, vegetables that need large spaces like pumpkins and melons unless they incorporate vertical plans, and long term programs like strawberries, asparagus and other plants that require several seasons to reach full production.

Modifications for central Texas

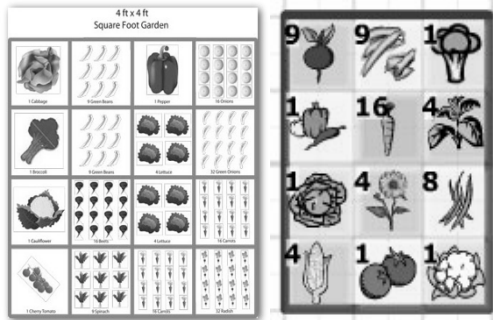
- Beds planted in the ground are fine so long as they are treated with large amounts of blended compost. Local soil is alkaline, often shallow and mostly clay. Additional soil amendments like horticultural corneal, dry or liquid molasses, and rock powders help soil tilth and biodiversity. A light organic fertilizer adds nutrients if needed.
- Garden spots currently occupied by Bermuda grass will require a sturdy barrier, solarization to kill the grass and its roots, and consistent maintenance to prevent the grass from growing up into the beds. This applies to both in ground and raised beds.
- Peat moss is antimicrobial due to its acidity; it is not recommended in ground beds as it will reduce the amount of beneficial microbes and reduce fertility. Vermiculite is fine.
- Sun exposure takes on greatest importance during the hottest days from mid-July through mid-September. Plant accordingly and provide extra shade if needed. Morning sun with afternoon shade is usually best in this area.
- Watering restrictions are generally applied in summer; watering before 8:00 a.m. or after 6:00 p.m. generally reduces loss due to evaporation. Bell and Coryell counties are currently experiencing voluntary or stage 1 restriction.
- Allelopathy from oak trees, wheat and heavy amounts of coffee grounds can prevent successful in-ground garden production. Companion planting is based in part on this biological phenomenon. So plant at least 10 feet from oak trees and choose plants that are compatible, and use this trait to your advantage when possible.
- Companion planting can be used to encourage health, production and utilize shade protection for cool weather plants to extend their growing season in our hotter months.

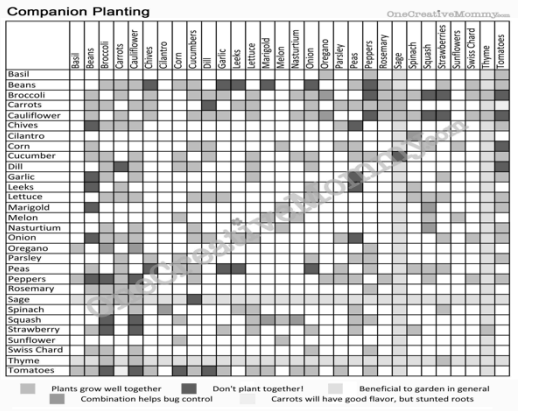
SQUARE FOOT PLANTING GUIDE

Arugula 16	Dill 9	Leeks 6	Rutabagas 4	Fennel 2	Bok Choy 1	Melons 1	Rosemary 1
Carrots 16	Onions 9	Bush Beans 4	Basil 2	Kale 2	Brussel Sprouts 1	Onia 1	Sage 1
Leaf Lettuce 16	Parsnips 9	Pole Beans 4	Calendula 2	Parsley 2	Cabbage 1	Oregano 1	Summer Squash 1
Radishes 16	Spinach 9	Garlic 4	Celery 2	Potatoes 2	Cauliflower 1	Hot Peppers 1	Winter Squash 1
Beets 9	Turnips 9	Kohlrabi 4	Corn 2	Swiss Chard 2	Chives 1	Peppers 1	Sweet Potatoes 1
Cilantro 9	Peas 8	Head Lettuce 4	Cucumbers 2	Thyme 2	Eggplants 1	Pumpkins 1	Tomatoes 1

Number denotes # of plantings per square foot

A couple of square foot gardening planting guides:



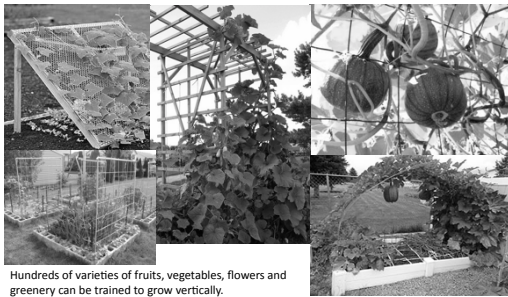


Frost Protection/Hoop House

Historically, the average date of our last killing frost in spring comes approximately March 14th. Seedlings planted in a brief warm period can be protected with frost cloth, sheets, or plastic (so long as it is not in contact with the plant).



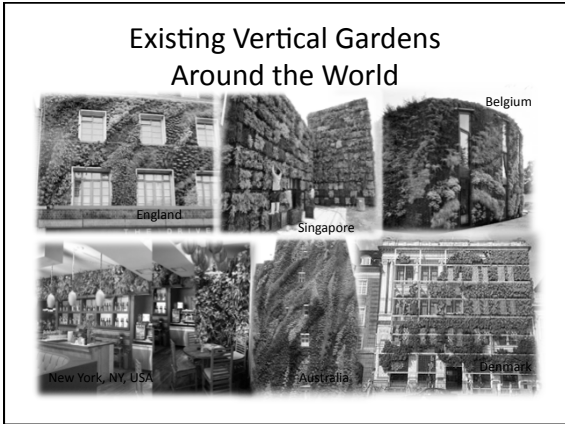
Vertical Growing Works with Square Foot Gardening



Vertical Gardening

This method of growing is specially adapted to areas with little or no space to grow in raised beds or the ground. Entire cities are being designed and built using vertical growing methods to support sustainable living.





Vertical Farming for the Future

This method is planned for future implementation all over the world and has taken hold as a way to conserve resources and reduce waste and energy consumption. Vertical farming has additional benefits that allow greater food production and address other pressing issues.

Climate Change	Resources	Food Production
Floods	Water Conservation	Population Growth
Deforestation	Arable Land	Crop Failure
Heat Islands	Energy	Pest Management
Severe Weather		

Seasonal Growing Rules Apply

Our county is in hardiness zone 8

A USDA geographically defined zone in which a specific category of plant life is capable of growing, as defined by temperature hardiness, the ability to withstand the minimum temperatures of that zone

Plants can survive minimum and maximum temperatures, soil types and pH, sun exposure or shade, water abundance or absence, and nutrient supply or deficiency. In Texas, it is more often the summer that kills off plants than the winter.

Pay attention to the requirements of your plants before planning your garden. In our area, it is not uncommon to plant a spring, summer and fall garden, and many plants will survive and grow through the coldest temperatures we normally experience each year here. Some plants that are annuals just north of us are perennial in this area and last for years.

Make Your Own Compost!

- Composting your own material is easy, affordable and fun!
- Create a worm bin and use worms to create worm castings and worm juice. Red wigglers work best for earthworms are okay too.
- Reduce the amount of your household waste taken to landfills and the amount you have to spend on buying compost from someone else.
- Compost in place to prepare new garden beds one season ahead and reduce labor spreading compost. Choose the space for your next in ground garden, and turn it in to your new compost space. When it is time to plant, scrape off the un-composted material and move it to your next new garden space.

Balance your compost with this easy formula:
Some animal manure adds beneficial microbes, but cat, dog and human feces are not recommended.

3 parts Brown
Items that have a high content of carbon or carbohydrates

Leaves, Branches, Twigs, Sawdust, Paper, Etc...



1 part Green
Items that have a high content of nitrogen or protein

Grass clippings, Flowers, Egg shells, Coffee grounds, Manure, Vegetables & peelings, Etc...

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Asparagus (transplants)												
Asparagus (seeds or transplants)												
Asparagus (seedlings)												
Beans, bush and pole												
Beets												
Broccoli (transplants)												
Broccoli (seeds or transplants)												
Cabbage (transplants)												
Carrots (seedlings)												
Carrots												
Cauliflower (transplants)												
Corn (seeds, transplants or transplants)												
Corn (seeds or transplants)												
Corn (seedlings)												
Cucumbers												
Edamame (transplants)												
Garlic (seeds)												
Garlic												
Green, hot pepper												
Green, sweet pepper												
Kale (seeds or transplants)												
Kumquat (seeds or transplants)												
Kumquat (seedlings or transplants)												
Kumquat												
Onion, bulb (seeds or transplants)												
Onion, bulb (transplants)												
Onion, bunching (seeds)												
Onion, bunching (transplants)												
Peas, English, snap and snow												
Peas, bush												
Pepper (transplants)												
Pepper, hot												
Pepper, sweet (seeds)												
Pepper, sweet (transplants)												
Pumpkin												
Spinach												
Spinach (seeds or transplants)												
Spinach (transplants)												
Squash, winter												
Squash (transplants)												
Tomato												
Watermelon												

Where to Learn More!

- www.squarefootgardening.org or .com
- www.melbartholomew.com
- <http://www.klru.org/ctg/> Central Tx Gardener
- www.naturalgardeneraustin.com John Dromgoole
- www.dirtdoctor.com Howard Garrett
- www.growingyourgreens.com John Kohler
- The Vertical Farm, by Dr. Dickson Despommier
